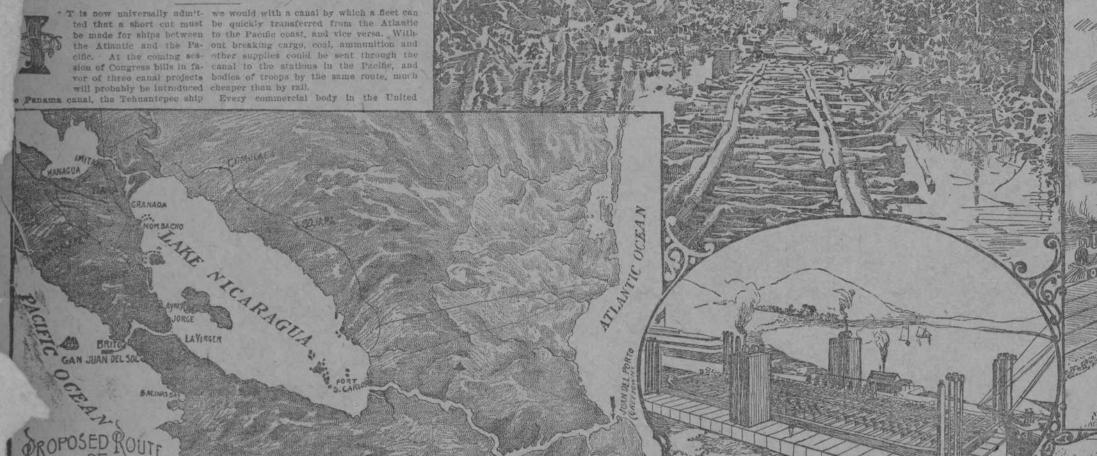
CORDUROY RAILROAD
THROUGH NICARAGUA SWAMPS

BEFORE CONGRESS

# ERESTING PLANS Three Proposed Routes for Big cean Vessels Across Central America and the Great Engineering Problems to Be Solved.

IVIDING North and South America by means of the Nicaragua Canal will be the next great engineering feat,

Americans will do it. American skill and ability will plan American contractors will execute it with the aid of American mainery. American commerce will make it a profitable venture. The urnal has repeatedly pointed out that this is a naval and commercial ssity, and the time has now come to dig the canal.



cad and the Nicaragua canal.

States wants the canal in order to shorten above the sea level, reaching within three the distance to the Pacific coast and East-ton engineers penetrated the tropical wilderness of Nicaragua, every part of the country south of Mexico has been carefully examined. The United States, Europe and Mexico have been interested. Elaborate Mexico have been made, volumes of sclentific Central American ship route. Southern cotdata compiled and every engineering prob-ton workers, Western food raisers and mark the canal in order to shorten above the sea level, reaching within three the distance of the Pacific and one-half miles of the Pacific and one-half miles

Commodore Vanderbilt paid the expenses of a survey out of his own pecket. Admiral Fault of his own pecket. After the cannot stretch out their glant arms and posting a survey out of his own pecket. After the cannot stretch out their glant arms and posting a survey out of his own pecket. After the cannot stretch out their glant arms and posting a survey out of his own pecket. After the machines cannot stretch out their glant arms and on a Congress. It must be constructed, however, while engines would be turned out of a digaway at the cannot stretch out their glant arms and dollar was ever returned to those who invested it.

The Nicaragua Route.

In Pacific side is what is known as a sum of the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the Pacific side is what is known as the point of the entire water. On the power to haul 3,600 tons each if desired.

The Nicaragua Route.

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In Pacific side is what is known as the few one is that a water way has been found that requires cannot digital way.

On the Pacific side is what is known as the field with vested it.

The Nicaragua coents a freak of nature. The best one is that a water way has been found that requires cannot digital way.

On the Pacific side is what is known as the field with the total say of the count of the corner way.

On the Pacific side is what is known as the field with vested it.

The Ship Canal Project.

The

seis to place us on a strong footing as fresh water, 153% miles long, 110 feet

ary work.

Naval officers agree that with the American flag flying over Hawali, the Philipters and Ladrones, we need twice as many self-based as a summit level of navigation in self-based as summit level of navigation in the highest point of the canal, lavolves tion as exists on the Nicaragua route, at Panama, 205 feet, and Tehuantepec has at Panama, 205 feet, and Tehuantepec has a mast fifty feet high, by another engineering problem, on which the highest point of the canal, lavolves tion as exists on the Nicaragua route, at Panama, 205 feet, and Tehuantepec has a mast fifty feet high, by another engineering problem, on which the latter is two and nine-tenths place their ships on a hear sea captina sea ca

river, and only a few miles from the Atlantle coast, an earthquake or some other

a depth of 200 feet at different points, and look gates in the world will seem as pig- pleted to the required depth of 29 feet, hundreds of calculations have been made as to the quantity which must be taken away to make the great hole. The estimates average about 17,000,000 cubic yards.

A cubic yard of rock means a stone three ton, and in far away Nicaragua on the cost work had been done. reet night three feet wide and three feet across. If 17,000,000 yards of the rock were placed in one pile it would form a mass surveys, following out the place of this waterway. To-day over 200 engl- How could \$250,000,000 have been spent neers and their assistants are making final in this distance? The fact is, but a small surveys, following out the place of the placed in one pale it would form a mass over one mile square and sixty feet high.

To take away this rock and to build bulks are massing man in this distance? The fact is, but a small surveys, following out the plans of the portion of it was spent on the work proper. Walker Commission, who visited the republic last year. The final calculations locks and dams to support the walls of water to the required depth are the great engineering feats of the Nicaragua Canal.
Tons of the most powerful explosives must
be used. Holes must be drilled in such a with which they are loaded will work directly on the portion of the channel to be exavated. Some of the blasts will contain weeked by mebs of people, who crowded with which work can be resumed at any fully 50,000 pounds of explosive.

basin in the Central American Plain, filled summit level and three on the other. The and other apparatus were at the scene of with fresh water ranging from 10 to 240 highest will raise a vessel 45 feet, and the operations. To build the railroad for carfeet in depth, and is 110 miles in length. lowest will raise her between 20 and 25 rying men and material, piles were driven in the control of t Its outlet is not less than 400 feet wide at fect. They are to be 650 feet long, 80 feet thirty and forty feet through a morass to any point, and varies from 12 to 50 and 60 wide and 30 feet deep. The St. Louis or make a solid foundation. The rise of water feet in depth. But at one point of the St. Paul, for instance, could easily be ac- in the Chagres, the largest river in the commodated in them.

convulsion, possibly a thousand years back, threw up a barrier of rock, which must be cut or rather blown out in order to allow the passage of large steamships.

The canal will not be less than 30 feet twenty feet in as many track and machinery, and frequently may track and machinery, and frequently the passage of large steamships.

The canal will not be less than 30 feet twenty feet in as many feet in as many

### By the Panama Route.

and fought for an opportunity to invest in time.

tance.

The natural part of the canal is formed by the San Juan River and Lake Nicaragua, of which it is an outlet. The lake is a plans provide for three on one side of the \$10,000,000 worth of dredges, locomotives plans in the Central American Plain, filled Panama district, would sometimes reach The canal will not be less than 30 feet twenty feet in as many hours, washing

while a hole had been made in the moun-A hundred experts for months have been tain range from 60 to 100 feet below its calculating in the offices of contractors in summit. The French engineers themselves

lowing from 15 to 20 per cent for contin- tor-general of the canal alone received

\$100,000 a year. In spite of the reckless extravagance something has been saved from the rules of

Mexico have been interested. Ethouats maps have been made, votations of adentities compiled and every eighneering problem test been sade grant and decisions. Central American ship rotte. Southern cot ton for over three-quarters of a century. The solicine has been a diplomatic question for over three-quarters of a century. Several times the United States and England have been on the verse of declaring many forms and the solicine in the country because of the country because the country the country because the country the country because the country the country because the country because the country because

\$500,000 in preliminary work. A railroad has been built across the Tehuantepec, but it only carries cargoes, not the vessels theuselves. Here is his idea in brief: The ship enters what looks like an ordinary dock filled with water, of course. At the bottom of the dock is an immense cradle or calsson constructed of steel. The water is lowered in the dock until the ship is received on the cradle in nearly the same manner as when she is in a dry dock. Hundreds of supports

Mr. Ends and his friends spent fully

NICARA GUA

STEAMSHIP TRAVELING ON

THE

CANAL.

PROPOSED RAILWAY



hotograph That Shows the Veins as Well as the Bones of the Hand. Dr. Ernest Greville. The first demonstrate or have not united.

## the Ever Wonderful X Rays.

not only the bones but the distribution of the blood versels. Interesting features clearly demonstrated are the rich capillary plexus, which nourishes the delicate organs of touch at the tip of the fingers, and the THE accompanying illustration shows peculiar rings or loop of the artery lead. the fields of America, in whose Catholic inof touch at the tip of the fingers, and the us the most novel experiment with lug to the thumb, whereby that member anxious interest, will contribute, all unthe X rays. It not only shows the may be easily extended without risk of consciously, the flower of their bloom. bones of the body, which heretofore is ell breaking the vessel. At the top of the bones of the body, which heretofore is solution to breaking the vessel. At the top of the fourth digit a ligature had been tied and the fourth digit a ligature had been tied and the contents squeezed out of the vessels great rich uplands of Wisconsin, Minne-sota, Dukota, Montana and Manifoba, the ever part of the body it is applied to. An trient artery, so called because it feeds wheat has poured in to Minnes interesting application has been made by the bone, is seen just between the two mills near the falls of Minnehaba (Laugh-Professors Crookes and Roentgen which revealed very plainly the arteries and veins

bones of the arm, to each of which it gives and Water) grind the rich grain to rich off a branch. At the palmar ends of the powder, finger bones little flat plates may be seen. In the Convent of the Sacred Heart at of the hand. The idea first occurred to separated by small spaces from the main parts of the bones. A medical man can was carried into effect by the Medical Supply Association, under the direction of Dr. Ernest Groville. The first demonstrate of the spaces from the main by this means determine the age of the body of a young person, because he knows that at a particular age certain bones have or have not unlied.

### Latest Development of tion was on the band of a child aged two American Flour for the Pope's Last Wafer.

terests Leo XIII, has taken such deep and

From Minneapolis, the bustling town of



Sister of the Sacred Heart Making the Sacramental Wafer